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REUSE AND DISPOSAL OF CONTAMINATED SOILS AT LANDFILLS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF WASTE PREVENTION

INTERIM POLICY # BWP-94-037

GOVERNMENT DOCUMENTS
COLLECTION

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This Policy provides guidance to the regulated community on the Department of Environmental Protection's requirements, standards, and approvals for testing, tracking, transport, and reuse or disposal of contaminated soils or dredged sediments at Massachusetts permitted landfills. This Policy should be used, as applicable, in conjunction with Bureau of Waste Site Cleanup Policy # WSC-94-400.

4/26/94
Date

Thomas B. Powers
Acting Commissioner

POLICY # BWP-94-037
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I. ADDRESSES OF DSWM REGIONAL SECTION CHIEFS

II. BIBLIOGRAPHY OF RELATED DOCUMENTS

III. LINED LANDFILLS ELIGIBLE TO ACCEPT CONTAMINATED SOILS

IV. MATERIAL SHIPPING RECORD AND LOG AND INSTRUCTIONS

BUREAU OF WASTE PREVENTION
POLICY # BWP-94-037

1.0 Policy Statement and Scope

This Policy provides guidance on the Department of Environmental Protection's (DEP) requirements, standards, and approvals for testing, tracking, transport, and reuse or disposal of contaminated soils or dredged sediments at Massachusetts permitted landfills.

Under this Policy, all contaminated soils and sediments must be accompanied by either a 21E Bill of Lading (BOL) or a Material Shipping Record (MSR) when transported to a Massachusetts permitted landfill. Specific approval procedures by the DEP's Division of Solid Waste Management (DSWM) are described in this Policy for soils and sediments proposed to be reused or disposed at lined or unlined landfills. Soils and sediments which are equal to or below the Table 1 contaminant levels and conform with the requirements contained in Section 6.0 of this Policy, *Landfill Operation Requirements*, do not require a Landfill - Minor Modification, BWP SW 22 or other approval by DSWM for reuse at Massachusetts lined landfills.

The following activities will require prior approval from the DSWM:

- Reuse at lined landfills of contaminated soils and sediments that exceed the Table 1 contaminant levels or do not meet the Section 6.0 Landfill Operation Requirements.

- Reuse of contaminated soils and sediments at unlined landfills.

- Disposal of contaminated soils and sediments at lined or unlined landfills.

This Policy is not meant to be, and should not be relied upon to be, a complete list of all the regulatory requirements for managing contaminated soils. Parties undertaking response actions which involve the management of contaminated soils should consult 310 CMR 40.0000 (MCP), and 310 CMR 30.00 (the Massachusetts Hazardous Waste regulations), and 310 CMR 19.000 (the Massachusetts Solid Waste Management Regulations) for applicable requirements. Parties undertaking dredging which produce an excess of 100 cubic yards of sediments should consult 314 CMR 9.00[1].

The information contained in this Policy is intended solely for guidance. This Policy does not create any substantive or procedural rights, enforceable by any party in any administrative proceeding with the Commonwealth.

This Policy will become effective immediately and remain in effect until a comprehensive policy on the subject of landfill cover and disposal is issued. This Policy, along with a concurrently issued Bureau of Waste Site Cleanup (BWSC) Policy[2], supersedes DEP Policy # WSC-400-89.

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[1] Massachusetts Department of Environmental Protection, 314 CMR 9.00, Certification for Dredging, Dredged Material Disposal and Filling in Waters, July 1, 1979.

[2] Massachusetts Department of Environmental Protection, Policy # WSC-94-400, Interim Remediation Waste Management Policy for Petroleum Contaminated Soils.

TABLE 1
ALLOWABLE CONTAMINANT LEVELS FOR SOIL REUSE AT LINED LANDFILLS[a]

CONTAMINANT[b]	Reuse Levels (mg/kg)[c]
Total Arsenic	40
Total Cadmium	80
Total Chromium	1,000
Total Lead	2,000
Total Mercury	10
Total Petroleum Hydrocarbons (TPH)	5,000
Total PCBs[d]	< 2
Total PAHs[e]	100
Total VOCs[f]	10
Conductivity[g] (μmhos/cm)	4,000
Listed or Characteristic Hazardous Waste (TCLP[h])	none

NOTES:

a Table 1 is reproduced in policy #WSC-94-400.

b Contaminant concentrations are in mg/kg, dry weight. Other contaminants are as noted.

c Lined landfills have a DEP approved, functioning liner with leachate collection and are operated in compliance with Massachusetts DEP regulations and policies. The criteria apply to reuse of soils at lined landfills as daily cover, intermediate cover, and pre-cap contouring material.

Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. This Policy does not specify what method should be used to quantify these contaminants. For example, Method 8100 defines the list of chemicals to be considered in calculating total PAHs. However, Methods 8270 or 8250 may be used to quantify PAH levels.

d Total concentrations of polychlorinated biphenyls listed in EPA Method 8080.

e Total concentrations of polynuclear aromatic hydrocarbons listed in EPA Method 8100.

f Total concentration of volatile organic compounds listed in EPA Method 8240 or equivalent.

g For soils or sediments which may be expected to be contain elevated NaCl (e.g. sediments from marine environments or road-salt stockpile affected soils).

h TCLP testing should be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be met or exceeded. For guidance parties should consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.

Additional copies of this Policy, and other policies and forms referenced throughout this policy may be obtained by calling the DEP InfoLine at (617) 338-2255 or 1-800-462-0444. The 21E Bill of Lading and Material Shipment Record forms and instructions can also be obtained through the Regional Service Centers located in each DEP Regional Office.

2.0 Background Statement

Previously, acceptance of contaminated soils at Massachusetts landfills was managed by the Department on a case-by-case basis. Much of these soils were generated as a result of response actions performed in accordance with Chapter 21E. Requests for landfill application of these soils were reviewed jointly by BWSC and DSWM staff. Soils from these sites were transported under a 21E Bill of Lading (BOL) in accordance with DEP Policy # WSC-400-89 Management Procedures for Excavated Soils Contaminated with Virgin Petroleum Oils.

That policy established standards for the landfill application of virgin petroleum contaminated soils in Massachusetts landfills based on the jar headspace analytical screening procedure, and total petroleum hydrocarbons (TPH). In addition, the prior approval of the appropriate Department regional office was needed prior to transporting such soils using a 21E BOL. That Policy did not provide guidance for contaminants other than TPH or volatiles. Following promulgation of 310 CMR 40.0000, the revised Massachusetts Contingency Plan (MCP) in October 1993, such soils must be transported under a 21E BOL in accordance with 310 CMR 40.0034 and 40.0035 with a Licensed Site Professional (LSP) opinion.

3.0 Applicability

This Policy is being issued to provide guidance to the regulated community on the reuse and disposal of contaminated soils at permitted Massachusetts landfills. This Policy applies to landfill operators' reuse and disposal of contaminated soils removed from 21E disposal sites; contaminated soils which exhibit concentrations of oil or hazardous material which are below the applicable notification thresholds specified in 310 CMR 40.0300; contaminated soils from out-of-state excavations; and contaminated dredged spoils. This Policy does not apply to soils or sediments that are contaminated with listed or characteristic hazardous wastes other than used or unused waste oils (see 310 CMR 30.252(2) as amended). Sections 4.0, 5.0, and 6.0 refer to cover at lined landfills.

4.0 Testing, Transport and Reporting

4.1 General

This Section applies to the testing, transport and reporting of soils or dredged sediments which are proposed for reuse as cover materials at Massachusetts lined landfills. The *Testing* Section (see Section 4.2) describes procedures to determine whether the soils meet the allowable contaminant levels found in Table 1. For those soils which have been determined to meet the allowable Table 1 contaminant levels, no DSWM prior approval is required, provided the transport and reporting provisions in this Section and the Section 6.0, *Landfill Operation Requirements,* are followed. The 21E Bill of Lading or the Material

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Shipping Record, as applicable, is to be used as specified in the MCP and this Section of the Policy:

- to summarize the sampling and analysis of soils or sediments;
- as a transport document for the contaminated soils or sediments, and;
- in record keeping and reporting.

4.2 Testing

Sampling of contaminated soil or sediment should be done at sufficient and adequately distributed locations so that the concentrations of the contaminants of concern which may be present in the soil are adequately characterized.

The factors listed below should be considered when developing and implementing a sampling plan to characterize contaminated soils and sediments. Evaluation of these release, source, and site specific conditions provide the basis for selection of field screening techniques, sampling methodologies, sampling frequencies, and analytical parameters used to adequately characterize contaminated soils:

- the type(s) and likely constituents of petroleum oil (i.e., unused waste oil or used waste oil, or mixtures of both);
- the presence or likelihood of any other oil or hazardous materials which may be present at the site of excavated contaminated soil or dredged sediments(e.g., chlorinated solvents, metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), halogenated volatile organic compounds (HVOCs);
- current and former site uses, past incidents involving the release of oil or hazardous materials, and past and present management practices of oil and/or hazardous materials at the site;
- the presence of listed or characteristic hazardous wastes in the environment at the site and/or in the vicinity of the excavation;
- visual/olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- soil matrix type - naturally occurring soils or fill/soil mixtures (i.e., homogeneous or heterogeneous soil conditions);
- the identification and segregation of discrete "hot spots";
- soil volume; and
- landfill requirements for acceptance of contaminated soils (including both chemical and physical requirements).

The Qualified Environmental Professional or LSP, as applicable, should refer to DEP Policies #WSC-94-400 and #WSC-91-401[3] for additional guidance on sampling procedures. In addition, for dredging projects which produce an excess of 100 cubic yards of sediments, the sampling and analysis must be adequate for proper review of the Application by Division of Water Pollution Control staff in accordance with 314 CMR 9.00.

4.3 21E Bill of Lading

Testing, transport and reporting requirements shall be in accordance with the applicable sections of the MCP and #WSC-94-400 for soils which are generated from a Chapter 21E regulated site. 310 CMR 40.0034 and 40.0035 describe the BOL requirements. The Sampling and Analysis Section of #WSC-94-400 provides further guidance for adequately characterizing contaminated soils generated as a result of a 21E response action.

4.4 Material Shipping Record

Contaminated soils which do not require notification under Section 310 CMR 40.0300 of the MCP are not required to be transported in accordance with the 21E BOL provisions. These may include contaminated soils which exhibit concentrations of contaminants below the applicable 21E notification thresholds specified in 310 CMR 40.0300, contaminated soils from out-of-state excavations or contaminated sediments from dredging projects. For the classes of soils described above, a Material Shipping Record (MSR) shall be submitted to the landfill by a Qualified Environmental Professional. Attachment IV, *Materials Shipping Record and Log and Instructions*, includes the required qualifications of the Qualified Environmental Professional and a copy of the MSR form.

4.5 Record Keeping

Chapter 21E BOLs and BWP MSRs shall be kept by the landfill operator for review by Department staff. All 21E BOLs and BWP MSRs shall be kept by the landfill permittee for at least three (3) years. This period shall be automatically extended for the duration of any enforcement action. This period may also be extended by order of the DEP. All record keeping shall be in compliance with 310 CMR 19.009 of the Solid Waste Management Regulations.

4.6 Reporting Requirements

The landfill permittee using these soils as cover shall annually send 21E BOL or BWP MSR summary reports with the landfill's regular annual operational reports to the applicable DSWM Regional Office as required by 310 CMR 19.130(34)(d). (See Attachment I for DSWM Regional Office addresses.) The summary reports shall include the source of the soils, amounts, dates received and reference the 21E BOL or BWP MSR Tracking Numbers.

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[3] MDEP, BWSC Policy #WSC-91-401 Policy for the Investigation, Assessment, and Remediation of Petroleum Releases: Interim Site Investigation Protocol Document, April 9, 1991.

4.7 Transport of Contaminated Soils

The transport of in-state-generated contaminated soils and dredged sediments to in-state landfills must be performed in accordance with the BOL provisions of 310 CMR 40.0030 or the MSR procedures described in this Policy as applicable. Transport may be by common carrier, provided that this method of transport is protective of health, safety, public welfare and the environment. All soils should be covered by a tarpaulin or other means during transport to prevent the soil from escaping the truck during transport. Soils generated outside the borders of Massachusetts and transported to Massachusetts landfill facilities must be transported in a manner consistent with any applicable requirements which govern the transport of contaminated soils in the generating state. Contaminated soils and dredged sediments generated out-of-state and transported to Massachusetts lined landfills may use a Material Shipment Record without prior approval by the DSWM provided the soils are not otherwise a hazardous waste and do not exceed the contaminant levels and criteria presented in Table 1 of this Policy. Nothing in this section of the policy is intended to prohibit the voluntary use of the 21E Bill of Lading process to document the transport of soils with contamination below the applicable 120 day notification threshold, specified in 310 CMR 40.0300, to lined landfills, provided that the soils are not a listed or characteristic hazardous waste.

5.0 Contaminant Criteria for Soil Reuse at Lined Landfills

Table 1 lists the maximum allowable contaminant levels for reuse of soil at lined landfills. The DEP has determined that the soil contaminant levels indicated in Table 1 are acceptable for reuse at lined landfills as daily cover, intermediate cover and pre-cap contouring material provided that all other provisions in this Policy (especially Section 4.0, *Testing, Tracking and Transport* and Section 6.0, *Landfill Operation Requirements*) are complied with. The DEP has compiled a list of landfills which are lined and have a leachate collection system (see Attachment III). These landfills should be contacted by the LSP or Qualified Environmental Professional to determine whether the operator has an interest in receiving contaminated soils for landfill reuse. The list may be updated from time to time.

6.0 Landfill Operation Requirements

Approval to use contaminated soils as cover at lined landfills in accordance with the criteria defined in Table 1 is based in part on the results of a risk assessment by DEP's Office of Research and Standards. This risk assessment was predicated on and requires adherence to the landfill operating procedures listed below for application of these soils at the landfill.

A. Preventative maintenance must be employed to ensure that the soil, whether stockpiled or applied to the landfill, does not erode into the area between the landfill and the property boundary.

B. Fugitive dust levels shall be kept to a minimum through the use of Best Management Practices such as chemical addition or other DSWM-approved method. This material shall be prohibited from use on haul roads or other areas used for vehicle or truck traffic.

C. Contaminated soils shall not be applied or placed in contact with the landfill liner without prior written approval of the DEP.

D. Contaminated soils applied as daily cover shall not exceed 25% of the total volume of solid waste disposed in any single day.

E. Storage of soils shall not take place on areas of the landfill which have received final cover unless the landfill receives prior written approval from the DEP.

F. Stockpiling of soils shall be limited to portions of the landfill which are lined.

G. Daily cover or other reuse materials which contain contaminated soils or sediments shall be applied within 90 days of receipt at the facility unless prior written approval by the DEP is obtained.

H. Soils and sediments shall have no free draining liquids. Visual inspection based on the source of excavate or dredge spoils shall be sufficient to determine whether there are free draining liquids in most cases. When there is a question whether this standard is met, EPA Method 9095 shall be used to determine the presence of free liquids in a representative sample of the soil or sediment.

I. The standards for daily cover in 310 CMR 19.130(15) must be met including the requirement that the cover material be substantially odor free.

J. The soils shall be free of solid waste (e.g. construction and demolition debris or other putrescible matter). See 310 CMR 16.05(3)(i) for conditionally exempted rubble processing (crushing) operations.

K. When soils or sediments are proposed for use as intermediate cover, the standards in 310 CMR 19.130(15)(c) must be met including the requirement that the material meet the following Unified Soil Classification System categories: G.C.; S.C.; C.H.; C.L.; or O.H. Other soils or sediments which are not classified as G.C., S.C., C.H., C.L. or O.H. must receive DEP approval prior to use as intermediate cover.

7.0 Soil Treatment, Reuse and Disposal Hierarchy

Contaminated soils or dredged sediments which do not require notification under Section 310 CMR 40.0300 of the MCP shall not be disposed of at landfills if a feasible alternative exists that involves the reuse, recycling, destruction, and/or detoxification of such soils. Cost shall not be the only reason for deeming such other alternatives infeasible. The applicant must demonstrate the feasibility of alternatives to soil disposal at a landfill. Feasibility determinations made pursuant to 310 CMR 40.0032(5) for 21E generated soils shall be considered consistent with this section of the policy.

8.0 Other Soil Reuse at Lined Landfills

A Landfill - Minor Modification, BWP SW 22 permit or other approval by DSWM shall be obtained prior to landfill reuse of any contaminated soils which:

1) fail to meet criteria in Table 1, or;
2) fail to meet the requirements in Section 6.0, *Landfill Operation Requirements,* of this Policy, or;
3) contain concentrations of oil or hazardous materials for which no threshold is specified in Table 1.

9.0 Soil Reuse at Unlined Landfills

Only uncontaminated soils will be allowed for cover and grading purposes at unlined landfills, unless the landfill owner or operator requests and DEP approves an application for Landfill - Minor Modification, BWP SW 22 or other DEP approval is granted. Such an application is to be submitted to the applicable DEP Regional Office with analytical soils data and landfill site data sufficient for DEP to make a determination.

10.0 Disposal of Contaminated Soils at Lined or Unlined Landfills

A Special Waste Determination (BWP SW 14 or BWP SW 31) or other approval by DSWM shall be obtained prior to disposal at a landfill for all contaminated soils.

ATTACHMENT I: ADDRESSES OF DSWM REGIONAL SECTION CHIEFS

Department of Environmental
Protection
Northeast Regional Office
10 Commerce Way
Woburn, MA 01801
ATTN: Solid Waste Section Chief

Telephone: (617) 935-2160

Department of Environmental
Protection
Central Regional Office
75 Grove Street
Worcester, MA 01605
ATTN: Solid Waste Section Chief

Telephone: (508) 792-7653

Department of Environmental
Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347
ATTN: Solid Waste Section Chief

Telephone: (508) 946-2828

Department of Environmental
Protection
Western Regional Office
436 Dwight Street, Suite 402
Springfield, MA 01103
ATTN: Solid Waste Section Chief

Telephone: (413) 784-1129

ATTACHMENT II: BIBLIOGRAPHY OF RELATED DOCUMENTS

1. Massachusetts Department of Environmental Protection, 310 CMR 4.00, Timely Action Schedule and Fee Provisions, July 1, 1992.

2. Massachusetts Department of Environmental Protection, 310 CMR 16.000, Site Assignment Regulations for Solid Waste Facilities, July 3, 1992.

3. Massachusetts Department of Environmental Protection, 310 CMR 19.000, Solid Waste Management Facility Regulations, July 3, 1992.

4. Massachusetts Department of Environmental Protection, 310 CMR 30.00, Hazardous Waste Regulations, September 24, 1993.

5. Massachusetts Department of Environmental Protection, 310 CMR 40.0000, Massachusetts Contingency Plan, November 19, 1993.

6. Massachusetts Department of Environmental Protection, Policy # WSC-400-89, Management Procedures for Excavated Soils Contaminated with Virgin Petroleum Oils, June 30, 1989 (superseded)

7. Massachusetts Department of Environmental Protection, Interim Policy Regarding the Regulatory Status of Soils Contaminated with Waste Oil of Unknown Origin, Memorandum from Thomas Powers, Deputy Commissioner, January 11, 1993.

8. Massachusetts Department of Environmental Protection, 314 CMR 9.00, Certification for Dredging, Dredged Material Disposal and Filling in Waters, July 1, 1979.

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection

William F. Weld
Governor
Trudy Coxe
Secretary, EOEA
David B. Struhs
Commissioner

Active Solid Waste Landfills with Liners in Massachusetts

August 1995

Including SL - Municipal Solid Waste (MSW) Landfills
DL - Demolition Landfills
AL - Ash Landfills

Department of Environmental Protection, Division of Solid Waste Management. This information is updated annually. For copies of this list call the DEP InfoLine at (617) 338-2255 (from area code 617 or outside of Massachusetts) or (800) 462-0444 (from area codes 413 or 508). Please direct questions or comments regarding this list to Brian Holdridge, (617) 292-5578.

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Column Heading Definitions

CAPPING Landfill cap, Completely, Partially or Not Capped.

CLOSE Permit expiration date or estimated date when the landfill will reach its overall capacity, whichever is first.

DEP REGION DEP's regional offices:
W - Western (101 Towns)
C - Central (80 Towns)
N - Northeast (95 Towns)
S - Southeast (75 Towns)

ID Unique identification number assigned to each solid waste management facility.

LINER The landfills on this list were operating lined cells at the time of publication. Some of these landfills also have unlined inactive cells.

OPEN Year the landfill began disposing of solid waste.

OPERATOR INFO Site Operator:
Address:
Contact Person:
Phone Number:

OPERATOR TYPE Type of operator, Municipal or Private.

OWNER INFO	Site Owner: Address: Contact Person: Phone Number:
OWNER TYPE	Type of owner, Municipal or Private.
SITE INFO	Facility Name: Address: Contact Person: Phone Number:
SITE TYPE	Type of solid waste landfill. SL - MSW Landfill AL - Ash Landfill DL - Demolition Landfill SD - Stump Landfill
STATUS	Identifies if the facility is active, inactive, closed or a proposed site. Active - Presently operating Inactive - Not operating, not properly closed Closed - Properly closed and capped according to DEP regulations Proposed - Presently under review for site assignment and/or permitting
TOWN	Town facility is located in.
TPY FOR *xYEAR*	Tons per Year of solid waste permitted for disposal at the specified landfill. Some facilities are permitted based on a daily tonnage, annual tonnages were calculated by multiplying operating days by daily tons; some facilities do not yet have a yearly permitted tonnage limit, annual tonnage was based on available estimates and historic data.

Notes:

1) The landfills on this list were operating lined cells at the time of publication. Some of these landfills also have inactive unlined cells.

2) The landfills on this list are lined landfills as referred to in the *Reuse and Disposal of Contaminated Soils at Landfills, Bureau of Waste Prevention, Interim Policy # BWP-94-037* (effective 4/26/94). For copies of the *Soils Policy* call the DEP InfoLine at (617) 338-2255 (from area code 617 or outside of Massachusetts) or (800) 462-0444 (from area codes 413 or 508). For additional information on this policy, contact Joel Hartley at the Division of Solid Waste Management (617) 292-5661.

Active Lined Solid Waste Landfills

Massachusetts Department of Environmental Protection, Division of Solid Waste Management

TOWN	*SITE NAME*	LANDFILL TYPE	Municipal / Private	Municipal / Private
ID	Address	Capping Info	Address	Address
DEP Region	Contact	Liner Info	Contact	Contact
Status	Phone.	1995: Tons per Year	Phone	Phone
	Open / Close Dates	1996: Tons per Year		
		1997: Tons per Year		

	SITE INFO		OWNER INFO	OPERATOR INFO
AGAWAM AL0005.004 W Active	***BONDIS ISLAND ASH LANDFILL*** M ST, BONDIS ISLAND AGAWAM, MA 01001 MICHAEL TRIGGS (413)787-6256 1968 2010	Ash Landfill Not Capped Lined 1995: 58,000 1996: 58,000 1997: 58,000	Municipal CITY OF SPRINGFIELD 1600 EAST COLUMBUS AVENUE SPRINGFIELD, MA 01103 PHILLIP PIKE, DPW DIR. (413)787-6256	Private RESOURCE CONTROL INC (RCI) P.O. BOX 550, 199 DEPOT RD BARRE, MA 01005 ROBERT MARKT (508)355-6828
AMHERST SL0008.002 W Active	***AMHERST LANDFILL*** BELCHERTOWN RD/RTE 9 (NEW) AMHERST, MA 01004 NOEL RYAN, DPW SUPER. (413)256-4050 1980 2000	MSW Landfill Partially Capped Lined 1995: 30,888 1996: 30,888 1997: 30,888	Municipal TOWN OF AMHERST 4 BOLTWOOD AVE AMHERST, MA 01002 STANLEY ZIOMEK, ASSIST TWN MAN (413)256-4001	Municipal AMHERST DPW 586 SOUTH PLEASANT ST, BOX 4 AMHERST, MA 01004 NOEL RYAN, DPW SUPER. (413)256-4004
BARRE SL0021.002 C Active	***MARTONE RCI LANDFILL*** 99 DEPOT RD/VALLEY/WORCESTER BARRE, MA 01005 PAUL MAHONEY (508)355-6828 1973 1997	MSW Landfill Partially Capped Lined 1995: 93,600 1996: 93,600 1997: 93,600	Private RESOURCE CONTROL, INC. (RCI) PO BOX 550, 199 DEPOT RD BARRE, MA 01005 ROBERT MARKT (508)355-6828	Private RESOURCE CONTROL, INC. (RCI) PO BOX 550, 199 DEPOT RD BARRE, MA 01005 ROBERT MARKT (508)355-6828
CARVER AL0052.007 S Active	***CARVER-MARION-WAREHAM ASH LF*** FEDERAL RD (SOUTH UNIT) CARVER, MA 02330 NAT T. MULE 1990 1999	Ash Landfill Not Capped Lined 1995: 131,600 1996: 131,600 1997: 131,600	Municipal CARVER-MARION-WAREHAM DISTRICT TWO SPRING STREET MARION, MA 02738 RAY PICKLES, EXEC. SEC MARION (508)748-3550	Private SEMASS PARTNERSHIP P.O. BOX 30, ROUTE 28 ROCHESTER, MA 02770 (508)291-2190
CHICOPEE SL0061.002 W Active	***PARTYKA LANDFILL*** NEW LOMBARD RD CHICOPEE, MA 01020 JOHN KOSKE (413)594-4172 1967 2011	MSW Landfill Partially Capped Lined 1995: 156,000 1996: 156,000 1997: 156,000	Private PARTYKA RESOURCE MANAGEMENT 645 SHAWNINIGAN DRIVE CHICOPEE, MA 01020 JOHN KRZEMINSKI (413)785-1581	Private CT VALLEY SOLID WASTE DISPOSAL 645 SHAWNINIGAN DRIVE CHICOPEE, MA 01020 JOHN KRZEMINSKI (413)785-1581
COHASSET DL0065.002 N Active	***COHASSET HEIGHTS DEMO LANDFILL*** 234 CROCKER LN/RTE 3A COHASSET, MA 02025 1978 1995	Demolition Landfill Partially Capped Lined 1995: 78,000 1996: 1997:	Private COHASSET HEIGHTS LTD 459 WATERTOWN ST NEWTON, MA 02160 JOHN BARRY, PRESIDENT (617)383-6500	Private COHASSET HEIGHTS LTD 459 WATERTOWN ST NEWTON, MA 02160 JOHN BARRY, PRESIDENT (617)383-6500

	SITE INFO		OWNER INFO	OPERATOR INFO
DARTMOUTH SL0072.003 S Active	***CRAPO HILL LANDFILL*** SAMUEL BARNETT BLVD DARTMOUTH, MA 02747 1995 2000	MSW Landfill Not Capped Lined 1995: 134,000 1996: 126,500 1997: 115,000	Municipal GRTR NEW BEDFORD REFUSE DIST. 400 SLOCUM RD DARTMOUTH MA 02747 EDITH DEMILLO, EXE. DIR. (508)999-0740	Municipal TOWN OF DARTMOUTH 759 RUSSELLS MILLS RD DARTMOUTH, MA 02748 MANUEL C. BRANCO, DPW DIRECTOR (508)999-0740
EAST BRIDGEWAT SL0083.003 S Active	***NORTHERN DISPOSAL BFI LANDFILL*** 234 THATCHER ST EAST BRIDGEWATER, MA 02333 JOHN DINAPOLI (508)588-2260 1978 1996	MSW Landfill Not Capped Lined 1995: 390,000 1996: 1997:	Private BROWNING FERRIS INDUSTRIES 234 THATCHER STREET EAST BRIDGEWATER, MA 02333 JOHN DINAPOLI (508)588-2260	Private BROWNING FERRIS INDUSTRIES 234 THATCHER STREET EAST BRIDGEWATER, MA 02333 JOHN DINAPOLI (508)588-2260
FALL RIVER SL0095.002 S Active	***BFI - FALL RIVER LANDFILL*** 1080 AIRPORT RD FALL RIVER, MA 02720 ROBERT DEROSA, SITE MANAGER (508)678-8860 1938 1997	MSW Landfill Partially Capped Lined 1995: 468,000 1996: 390,000 1997: 390,000	Private BROWNING-FERRIS INDUSTRIES 1080 AIRPORT RD FALL RIVER, MA 02720 ROBERT DEROSA, SITE MANAGER (508)678-8860	Private BROWNING-FRRRIS INDUSTRIES 1080 AIRPORT RD FALL RIVER, MA 02720 ROBERT DEROSA, SITE MANAGER (508)678-8860
GRANBY SL0111.001 W Active	***GRANBY-HOLYOKE LANDFILL*** NEW LUDLOW RD/RTE 122 GRANBY, MA 01033 JOHN KOSKE (413)467-3200 1960 1997	MSW Landfill Not Capped Lined 1995: 124,800 1996: 124,800 1997:	Private PARTYKA RESOURCE MANAGEMENT 645 SHAWNINIGAN DRIVE CHICOPEE, MA 01020 JOHN KREZEMINSKI (413)785-1581	Private HOLYOKE SANITARY LANDFILL INC. 645 SHAWNINIGAN DRIVE CHICOPEE, MA 01020 JOHN KREZEMINSKI (413)785-1581
GREENFIELD SL0114.001 W Active	***GREENFIELD LANDFILL*** WISDOM WAY GREENFIELD, MA 01301 JOHN BEAN, DPW DIR. (413)772-1528 1970 1998	MSW Landfill Partially Capped Lined 1995: 5,200 1996: 5,200 1997: 5,200	Municipal TOWN OF GREENFIELD 14 COURT SQUARE GREENFIELD, MA 01301 JOHN BEAN, DPW DIR. (413)772-1560	Municipal TOWN OF GREENFIELD, DPW WISDOM WAY GREENFIELD, MA 01301 JOHN BEAN, DPW DIR. (413)772-1528
HARDWICK SL0124.001 C Active	***HARDWICK LANDFILL*** PATRILL HOLLOW RD HARDWICK, MA 01037 DAVID ROACH (413)967-5985 1967 1999	MSW Landfill Partially Capped Lined 1995: 28,080 1996: 28,080 1997: 28,080	Private HARDWICK LANDFILL, INC. 3495 GREENWICH RD WARE, MA 01082 DAVID ROACH (413)967-5985	Private HARDWICK LANDFILL, INC. 3495 GREENWICH RD WARE, MA 01082 DAVID ROACH (413)967-5985
HAVERHILL AL0128.010 N Active	***OGDEN HAVERHILL ASH LANDFILL*** NECK RD/WARD HILL AVE HAVERHILL, MA 01835 ASHVIN PATEL, ENGINEER (508)372-6288 unknown 2009	Ash Landfill Partially Capped Lined 1995: 202,575 1996: 202,575 1997: 202,575	Private OGDEN MARTIN SYSTEMS HAVERHILL 100 RECOVERY WAY HAVERHILL, MA 01835 TED HOFLER (508)372-6288	Private OGDEN MARTIN SYSTEMS HAVERHILL 100 RECOVERY WAY HAVERHILL, MA 01835 ASHVIN PATEL, ENGINEER (508)372-6288
HUDSON SL0141.002 C Active	***RCI HUDSON/STOW LANDFILL*** OLD STOW/CEMETERY RDS HUDSON, MA 01749 PAUL E. MAHONEY (508)355-6828 unknown 1997	MSW Landfill Not Capped Lined 1995: 37,440 1996: 37,440 1997: 37,440	Private RESOURCE CONTROL INC. (RCI) P.O. BOX 550, 199 DEPOT RD BARRE, MA 01005 PAUL E. MAHONEY (508)355-6828	Private RESOURCE CONTROL INC. (RCI) P.O. BOX 550, 199 DEPOT RD BARRE, MA 01005 PAUL E. MAHONEY (508)355-6828

	SITE INFO		OWNER INFO	OPERATOR INFO
HULL SL0142.002 N Active	***HULL LANDFILL*** LOGAN AVE HULL, MA 02045 unknown 1995	MSW Landfill Partially Capped Lined 1995: 720 1996: 1997:	Municipal TOWN OF HULL 253 ATLANTIC AVE. HULL, MA 02045 NORMAN ROGERS (617)925-2000	Municipal HULL DPW 253 ATLANTIC AVENUE HULL, MA 02045 NORMAN ROGERS (617)925-3384
MIDDLEBOROUG SL0182.002 S Active	***MIDDLEBOROUGH LANDFILL*** BROOK ST MIDDLEBOROUGH, MA 02346 JOHN HEALEY 1963 1998	MSW Landfill Not Capped Lined 1995: 12,480 1996: 12,480 1997: 12,480	Municipal TOWN OF MIDDLEBOROUGH NICKERSON AVE. MIDDLEBOROUGH, MA 02346 JOHN HEALEY, TOWN MANAGER (508)947-0928	Municipal TOWN OF MIDDLEBOROUGH NICKERSON AVE. MIDDLEBOROUGH, MA 02346 JOHN HEALEY, TOWN MANAGER (508)947-0928
NORTHAMPTON SL0214.001 W Active	***NORTHAMPTON LANDFILL*** GLENDALE RD NORTHAMPTON, MA 01060 PETER MCERLAIN, BOH AGENT (413)586-3726 unknown 2004	MSW Landfill Not Capped Lined 1995: 40,150 1996: 40,150 1997: 40,150	Municipal CITY OF NORTHAMPTON CITY HALL ANNEX, 210 MAIN ST NORTHAMPTON, MA 01060 PETER MCERLAIN, BOH AGENT (413)586-6950	Private WICKLES TRUCKING (PARTYKA) 645 SHAWINIGAN DRIVE CHICOPEE, MA 01020 DAVID WICKLES/JOHN KRZEMINSKI (413)785-1581
PEABODY AL0229.002 N Active	***NESWC ASH LANDFILL*** FARM AVE PEABODY, MA 01960 1984 1995	Ash Landfill Not Capped Lined 1995: 113,588 1996: 1997:	Municipal CITY OF PEABODY 24 LOWELL ST PEABODY, MA 01960 JOHN SEITES, DPW DIR. (508)532-3000	Municipal PEABODY DPW BARRY ST. PEABODY, MA 01960 JOHN SEITES, DPW DIR. (508)538-3000
PLAINVILLE SL0238.002 S Active	***LAIDLAW LANDFILL*** 14 BELCHER ST/RTE 1-495 PLAINVILLE, MA 02762 JOSEPH DONZE, LF MANAGER (508)699-2267 1975 1995	MSW Landfill Not Capped Lined 1995: 715,000 1996: 1997:	Private LAIDLAW WASTE SYSTEMS INC 14 BELCHER ST PLAINVILLE, MA 02762 JOSEPH DONZE, LF MANAGER (508)699-2267	Private LAIDLAW WASTE SYSTEMS INC 14 BELCHER ST PLAINVILLE, MA 02762 JOSEPH DONZE, LF MANAGER (508)699-2267
SHREWSBURY AL0271.004 C Active	***SHREWSBURY ASH LANDFILL*** RTE 20 SHREWSBURY, MA ROBERT P. JACQUES (508)791-8900 1987 2007	Ash Landfill Partially Capped Lined 1995: 375,000 1996: 375,000 1997: 375,000	Private WHEEELABRATOR ENVIRON SYSTEMS 12 KENT WAY, SUITE 201 BYFIELD, MA 01922 DAN MADIGAN (508)462-9556	Private WHEELABRATOR ENVIRON SYSTEMS 331 SW CUTTOFF, P.O. BOX 740 MILLBURY, MA 01527 JOHN O'SULLIVAN, MNGR (508)791-8900
SOMERSET AL0273.003 S Active	***SOMERSET POWER PLANT ASH LF*** BRAYTON PT STA/RTE 6 COAL&OIL SOMERSET, MA 02726 unknown 1998	Ash Landfill Partially Capped Lined 1995: 107,675 1996: 107,675 1997: 107,675	Private NEW ENGLAND POWER COMPANY 20 TURNPIKE RD. WESTBOROUGH, MA 01581 JOSEPH M. KWASNIK	Private NEW ENGLAND POWER COMPANY 20 TURNPIKE RD. WESTBOROUGH, MA 01581 JOSEPH M. KWASNIK
SOUTHBRIDGE SL0278.002 C Active	***SOUTHBRIDGE LANDFILL (NEW)*** BAREFOOT FARM RD SOUTHBRIDGE, MA 01550 HAMER CLARK, DPW DIR. (508)764-5403 1980 2000	MSW Landfill Not Capped Lined 1995: 4,160 1996: 4,160 1997: 4,160	Municipal TOWN OF SOUTHBRIDGE 41 ELM STREET SOUTHBRIDGE, MA 01550 HAMER CLARK, DPW DIR. (508)764-5403	Municipal SOUTHBRIDGE DPW 41 ELM STREET SOUTHBRIDGE, MA 01550 HAMER CLARK, DPW DIR. (508)764-5403

	SITE INFO		OWNER INFO	OPERATOR INFO
STURBRIDGE SL0287.001 C Active	***STURBRIDGE LANDFILL*** BREAKNECK RD STURBRIDGE, MA 01566 TOM BLAKE (508)378-7608 1970 2000	MSW Landfill Not Capped Lined 1995: 2,458 1996: 2,458 1997: 2,458	Municipal TOWN OF STURBRIDGE 308 MAIN STREET STURBRIDGE, MA 01566 GREGORY VALITON, DPW DIR (508)347-2507	Municipal TOWN OF STURBRIDGE 308 MAIN STREET STURBRIDGE, MA 01566 GREGORY VALITON, DPW DIR (508)347-2507
TOWNSEND SL0299.002 C Active	***TOWNSEND LANDFILL*** TURNPIKE/MASON RDS TOWNSEND, MA 01469 1978 1996	MSW Landfill Not Capped Lined 1995: 15,600 1996: 15,600 1997:	Municipal TOWN OF TOWNSEND TOWN HALL TOWNSEND, MA 01469 (508)597-2837	Private RESOURCE CONTROL INC. (RCI) P.O. BOX 550, 199 DEPOT RD BARRE, MA 01005 PAUL MAHONEY (508)335-6821
WAYLAND SL0315.004 N Active	***WAYLAND SAND HILL LANDFILL*** 484 BOSTON POST RD (RTE 20) WAYLAND, MA 01778 CHARLES KILEY (508)358-7910 unknown 2001	MSW Landfill Partially Capped Lined 1995: 2,340 1996: 2,340 1997: 2,340	Municipal TOWN OF WAYLAND 41 COCHITUATE RD WAYLAND, MA 01778 TOMA DUHANI, HIGHWAY DEPT. (508)358-7910	Municipal WAYLAND HIGHWAY DEPARTMENT 195 MAIN ST WAYLAND, MA 01778 TOMA DUHANI, HIGHWAY DEPT. (508)653-4121
WENDELL DL0319.003 W Active	***MORMON HOLLOW DEMO LANDFILL*** MORMON HOLLOW RD WENDELL, MA 01379 DEAN BENNETT (508)544-8006 1990 1999	Demolition Landfill Partially Capped Lined 1995: 25,740 1996: 25,740 1997: 25,740	Private JOSEPH DIEMAND MORMAN HOLLOW ROAD WENDELL, MA 01379 DEAN BENNETT, D&B ENTERPRISES (508)544-8006	Private D & B ENTERPRISES P.O. BOX 202 WENDELL, MA 01379 DEAN BENNETT, PRESIDENT (508)544-8006
WESTMINSTER SL0332.001 C Active	***FITCHBURG-WESTMINSTER LANDFILL*** RTE 31/PRINCETON RD WESTMINSTER, MA 01473 unknown 1998	MSW Landfill Partially Capped Lined 1995: 156,000 1996: 156,000 1997: 156,000	Municipal CITY OF FITCHBURG 718 MAIN ST FITCHBURG, MA 01420 TOWN LEASED FROM RCI-OWNER (508)345-9550	Private RESOURCE CONTROL, INC. P.O. BOX 550, DEPOT ROAD BARRE, MA 01005 ROBERT MARKT/PAUL MAHONEY (508)355-6821

Report Summary

Total Number of Active Lined Solid Waste Landfills 27

Total Permitted Tonnage for 1995: 3,509,094

Total Permitted Tonnage for 1996: 2,126,286

Total Permitted Tonnage for 1997: 1,974,386

Lined Landfills by Type and Ownership

Owner Type	*Landfill Type* MSW Landfill	Ash Landfill	Demo Landfill	*Totals*
Municipal	11	3	0	14
Private	8	3	2	13
Totals	19	6	2	27